

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for determining whether a test compound is an inhibitor of bacterial tetrahydrofolate biosynthesis, the method comprising:
 - (i) contacting a bacterial cell with a test compound, wherein the bacterial cell contains a panB promoter, the activity of which is increased in the presence of a compound that inhibits tetrahydrofolate biosynthesis; and
 - (ii) measuring activity of the panB promoter, wherein an increase in activity, relative to the level of activity of the promoter in the absence of the test compound, indicates that the test compound is an inhibitor of bacterial tetrahydrofolate biosynthesis.
2. (Canceled)
3. (Currently Amended) A method of claim 1 2, wherein the panB promoter comprises a nucleic acid sequence as set forth in SEQ ID NO:1 or a fragment thereof.
4. (Original) A method of claim 1, wherein the activity of the promoter is measured by an antibody specific for a polypeptide selected from the group consisting of: aspartate 1-decarboxylase, pantothenate synthase, and ketopantoate hydroxymethyltransferase.
5. (Original) A method of claim 1, wherein the activity of the promoter is measured by an assay for the activity of an enzyme selected from the group consisting of: aspartate 1-decarboxylase, pantothenate synthase, and ketopantoate hydroxymethyltransferase.

6. (Original) A method of claim 1, wherein the activity of the promoter is measured by detecting the RNA species transcribed from the gene regulated by the promoter.

7. (Original) A method of claim 1, wherein the cell contains the promoter operably linked to a reporter gene.

8. (Original) A method of claim 7, wherein the reporter gene is selected from the group consisting of lacZ, cat, gus, a luciferase gene, and a green fluorescent protein gene.

9. (Currently Amended) A method for determining whether a test compound is an inhibitor of bacterial tetrahydrofolate biosynthesis, the method comprising:

(i) contacting a bacterial cell with a test compound, wherein the bacterial cell contains

(a) a panB promoter, the activity of which is increased in the presence of a compound that inhibits tetrahydrofolate biosynthesis, operably linked to

(b) a reporter gene; and

(ii) measuring activity of the panB promoter, wherein an increase in activity, relative to the level of activity of the promoter in the absence of the test compound, indicates that the test compound is an inhibitor of bacterial tetrahydrofolate biosynthesis.

10. (Original) A method of claim 9, wherein the reporter gene is selected from the group consisting of lacZ, cat, gus, a luciferase gene, and a green fluorescent protein gene.

11. (Original) A method of claim 9, wherein measuring an increase in activity of the promoter comprises measuring binding of antibodies to a product of the reporter gene.

12. (Canceled)

13. (Currently Amended) A method of claim 9 ~~12~~, wherein the panB promoter comprises a nucleic acid sequence as set forth in SEQ ID NO:1 or a fragment thereof.

14. (Currently Amended) A method for determining whether a test compound is an antibacterial agent, the method comprising:

- (i) contacting a bacterial cell with a test compound, wherein the bacterial cell contains
 - (a) a panB promoter, the activity of which is increased in the presence of a compound that inhibits tetrahydrofolate biosynthesis, operably linked to
 - (b) a reporter gene;
- (ii) measuring activity of the panB promoter, wherein an increase in activity, relative to the level of activity of the promoter in the absence of the test compound, indicates that the test compound is an inhibitor of bacterial tetrahydrofolate biosynthesis; and
- (iii) determining whether the inhibitor of tetrahydrofolate biosynthesis inhibits the growth of a bacterium, wherein a compound that inhibits the growth of a bacterium is an antibacterial agent.

15. (Original) A method of claim 14, further comprising assaying the test compound for its ability to inhibit tetrahydrofolate biosynthesis.

16. (Original) A method of claim 15, wherein inhibition of tetrahydrofolate biosynthesis is detected as inhibition of para-aminobenzoic acid (PABA) uptake into cells.

17. (Original) A method of claim 15, wherein inhibition is measured in a biochemical assay with a cell extract for an enzyme activity which is required for tetrahydrofolate biosynthesis.

18. (Original) A method of claim 17 wherein the enzyme activity assayed is selected from the group consisting of: GTP cyclohydrazase, 7,8 dihydroneopterin aldolase, 6-hydroxymethyl-7,8-dihydropterin pyrophosphokinase, dihydropteroate synthase, aminodeoxychorismate synthase, aminodeoxychorismate lyase, dihydrofolate:folyl-polyglutamate synthase, and dihydrofolate reductase.

19 to 26 (Canceled)

27. (Original) A method of preparing an inhibitor of bacterial tetrahydrofolate biosynthesis, the method comprising:

- screening multiple test compounds by the method of claim 9;
- identifying candidate compounds that increase promoter activity;
- identifying, and selecting from the candidate compounds a lead compound that inhibits bacterial tetrahydrofolate biosynthesis; and
- formulating the selected lead compound as an inhibitor of bacterial tetrahydrofolate biosynthesis.

28. (Original) A method of preparing an antibacterial agent, the method comprising:

- screening multiple test compounds by the method of claim 14;
- identifying candidate compounds that upregulate promoter activity;
- identifying and selecting from the candidate compounds a lead compound that inhibits growth of a bacterium; and
- formulating the selected lead compound as an antibacterial agent.

29 to 35 (Canceled)